IN THE CLAIMS

Please cancel claim 19 without prejudice.

Please add claim 38.

Please amend claims 17, 18, 20-22, 25, 26, 28, 29, 31-33, and 35-37 as follows:

1-16. (Cancelled)

17. (Currently Amended) A force sensor comprising:

a substrate made of a material from a group consisting of glass, ceramic, plastic, a polymer film, metal film, and paper; and

an organic field effect transistor applied on the substrate, in which a mechanical force acting on the transistor causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force, the organic field effect transistor comprising an active layer provided between a gate dielectric and a passivation layer and between a source electrode and a drain electrode, wherein the active layer is made of a material selected from the group consisting of pentacene, thiophene, oligothiophene, polythiophene, and fluorene.

18. (Currently Amended) The force sensor according to claim 17, ~~comprising~~ wherein the organic field effect transistor is a pentacene transistor having an active layer made of pentacene between its source electrode and its drain electrode.

19. (Cancelled)

20. (Currently Amended) The force sensor according to ~~Claim 19~~claim 17, ~~comprising~~ wherein the substrate comprises a polymer film having a material from a group consisting of polyethylene napthalate, polyethylene terephthalate, polyimide, polycarbonate and/or polyethene ether ketones.

21. (Currently Amended) The force sensor according to claim 17, ~~comprising~~ wherein the detected measurement quantity is the drain-source voltage of the organic field effect transistor, a constant gate-source voltage and a constant drain current being present at the transistor at the measurement instant.

22. (Currently Amended) The force sensor according to ~~one of~~ claim 17, ~~comprising~~ wherein the detected measurement quantity is the drain current of the organic field effect transistor, a constant gate-source voltage and a constant drain-source voltage being present at the transistor at the measurement instant.

23. (Previously Presented) A pressure sensor comprising:

at least one force sensor comprising a substrate, and an organic field effect transistor applied on the substrate, in which a mechanical force acting on the transistor causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force; and

where the substrate is configured as a deformable diaphragm and the measurement quantity corresponding to the bending state of the diaphragm.

24. (Previously Presented) A one- or two-dimensional position sensor for measuring the position of a mechanical force action along a line or within an area using a multiplicity of force sensors comprising:

one or more force sensors comprising a substrate, and an organic field effect transistor applied on the substrate, in which a mechanical force action on the transistor causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force; and

where the force sensors are arranged at regular distances from one another in a form of a one- or two-dimensional matrix on a common substrate.

25. (Currently Amended) The sensor according to ~~Claim~~ claim 24, comprising ~~wherein~~ a driving and measuring unit ~~is~~ connected to the drain or source terminals of all the field effect transistors for driving and detecting the position of the force action.

26. (Currently Amended) The sensor according to ~~Claim~~ claim 25, comprising:

where the organic field effect transistors are arranged in rows and columns; and

a driving and measuring unit is connected to the drain or source terminals of all the columns for the purpose of driving and detecting the column position of the force action and a row decoder is connected or can be connected to the gate terminals of the organic field effect transistors for row-by-row selection and driving of the organic field effect transistors.

27. (Previously Presented) A fingerprint sensor comprising:

a multiplicity of force sensors according to claim 17 that are arranged on a common substrate at regular distances in the form of a two-dimensional matrix subdivided into rows and columns;

a driving and measuring unit connected to the drain or source terminals of the organic field effect transistors in all columns for the purpose of driving and detecting the column position of the force action; and

a row decoder connected to the gate terminals of the organic field effect transistors of all the rows for row-by-row selection and detection of the position of the force action in the row direction.

28. (Currently Amended) The fingerprint sensor according to ~~Claim~~ claim 27, comprising:

at least one perspiration-resistant protective layer provided as protection against the ingress of water and organic contaminations above the active layer of the organic field effect transistors.

29. (Currently Amended) The fingerprint sensor according to claim 28, ~~comprising~~ wherein the protective layer includes a perfluorinated material.

30. (Previously Presented) The fingerprint sensor according to claims 29, where the perfluorinated material is perfluorohexadecane.

31. (Currently Amended) The fingerprint sensor according to ~~Claim~~ claim 28, ~~comprising~~ wherein a first protective layer includes a hydrophobic material and a second protective layer includes a hydrophilic polymer which acts as a diffusion barrier against lipophilic contaminants.

32. (Currently Amended) The fingerprint sensor according to ~~Claim~~ claim 31, ~~comprising~~ wherein the first protective layer covers the second protective layer.

33. (Currently Amended) The fingerprint sensor according to ~~Claim~~ claim 31, ~~comprising~~ wherein the second protective layer covers the first protective layer.

34. (Previously Presented) A force sensor comprising:

a substrate; and

means for providing an organic field effect transistor applied on the substrate, in which a mechanical force acting on the transistor means causes a change in its source-drain voltage or its source-drain current which corresponds to the force and is detected as measurement quantity for the acting force.

35. (Currently Amended) The force sensor according to claim 34, ~~comprising~~ wherein the organic field effect transistor means is a pentacene transistor having an active layer made of pentacene between its source electrode and its drain electrode.

36. (Currently Amended) The force sensor according to claim 34, ~~comprising~~ wherein the substrate is made of a material from a group consisting of glass, ceramic, plastic, a polymer film, metal film or paper.

37. (Currently Amended) The force sensor according to claim 34, ~~comprising~~ wherein the substrate comprises a polymer film having a material from a group consisting of polyethylene napthalate, polyethylene terephthalate, polyimide, polycarbonate and/or polyethene ether ketones.

38. (New) The sensor according to claim 24, wherein the organic field effect transistor comprises an active layer provided between a gate dielectric and a passivation layer and between a source electrode and a drain electrode, wherein the active layer is made of a material selected from the group consisting of pentacene, thiophene, oligothiophene, polythiophene, and fluorene.